

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) A luminaire system configured to generate white light with a desired correlated colour temperature, the luminaire system comprising:

a) a light module including:

i) one or more white light-emitting elements configured to generate a first white light having a particular correlated colour temperature;

ii) one or more first colour light-emitting elements configured to generate light of a first colour;

iii) one or more second colour light-emitting elements configured to generate light of a second colour,

wherein the one or more white light-emitting elements are configured to generate the first white light independent of each of the light of the first colour generated by the one or more first colour light-emitting elements and the light of the second colour generated by the one or more second light-emitting elements;

b) a feedback system configured to collect operational temperature information regarding the light module;

c) a drive and control system configured to receive said temperature information, and configured to control the supply of power to each of the one or more white light-emitting elements, the one or more first colour light-emitting elements, and the one or more second colour light-emitting elements based on the temperature information and the desired correlated colour temperature; and

d) an optical system configured to extract and mix the light generated by the light module thereby creating an output beam of a second white light having the desired correlated colour temperature,

wherein the one or more first colour light-emitting elements and the one or more second colour light-emitting elements are arranged in relationship with the one or more white light-emitting elements to provide the second white light having the desired correlated colour temperature when the light generated by the light module, including the first white light having the particular colour correlated temperature is extracted and mixed.

2. (Previously presented) The luminaire system according to claim 1, wherein the feedback system further comprises one or more optical sensors configured to collect optical information relating to light generated by the light module, wherein a drive and control system receives said optical information and further controls the supply of power to each of the one or more white light-emitting elements, the one or more first colour light-emitting elements, and the one or more second colour light-emitting elements based on the optical information.
3. (Previously presented) The luminaire system according to claim 2 wherein the light module further comprises one or more third colour light-emitting elements configured to generate light of a third colour.
4. (Original) The luminaire system according to claim 2, wherein the first colour light-emitting elements generate green light.
5. (Original) The luminaire system according to claim 4, wherein the second colour light-emitting elements generate blue or red light.
6. (Original) The luminaire system according to claim 3, wherein the first colour light-emitting elements generate green light, the second colour light-emitting elements generate blue light and the third colour light-emitting elements generate red light.
7. (Original) The luminaire system according to claim 2, wherein the white light-emitting elements, first colour light-emitting elements and the second colour light-emitting elements are manufactured using a similar material technology.

8. (Original) The luminaire system according to claim 7, wherein the similar material technology is based on indium gallium nitride.

9. (Currently amended) A method for generating mixed white light, the method comprising:
generating a first coloured light from one or more first colour light-emitting elements;
and

generating a second coloured light from one or more second colour light-emitting elements;

generating, from one or more white light-emitting elements, a first white light independent of each of the first coloured light and the second coloured light; ~~and~~

mixing the first coloured light, the second coloured light, and the first white light to generate a mixed white light having a desired correlated colour temperature; and

arranging the one or more first colour light-emitting elements and the one or more second colour light-emitting elements in relationship with the one or more white light-emitting elements to generate the mixed white light having the desired correlated colour temperature when the first coloured light, the second coloured light, and the first white light are mixed.

10. (Original) The method according to claim 9, further comprising the step of generating and mixing in light generated by one or more third colour light-emitting elements.

11. (Original) The method according to claim 9, further comprising the step of detecting an operational temperature of the one or more white light-emitting elements, one or more first colour light-emitting elements and one or more second colour light-emitting elements and adjusting operation of the one or more first colour light-emitting elements and one or more second colour light-emitting elements in response to the detected operational temperature.

12. (Original) The method according to claim 9, further comprising the step of detecting optical characteristics of the mixed white light and adjusting operation of the one or more first colour light-emitting elements and one or more second colour light-emitting elements in response to the

detected optical characteristics.

13. (Original) The method according to claim 9, wherein the first colour light-emitting elements generate green light.

14. (Original) The method according to claim 13, wherein the second colour light-emitting elements generate blue or red light.

15. (Original) The method according to claim 9, wherein the first colour light-emitting elements generate green light, the second colour light-emitting elements generate blue light and the third colour light-emitting elements generate red light.

16. (Original) The method according to claim 9, wherein the white light-emitting elements, first colour light-emitting elements and the second colour light-emitting elements are manufactured using a similar material technology.

17. (Original) The method according to claim 16, wherein the similar material technology is based on indium gallium nitride.